

# MRB(45°Step)

Washable



## Super-Miniature Rotary Switches

RoHS Compliant

### ■ Features

1. High contact reliability assured (Twin contact type)
2. Selection of various circuits is flexible.
3. Fully-sealed structure protects the contacts from environmental contamination.
4. Immersion cleaning is possible.
5. Best suited for use in dry circuit since the contacts and terminals are gold-plated.

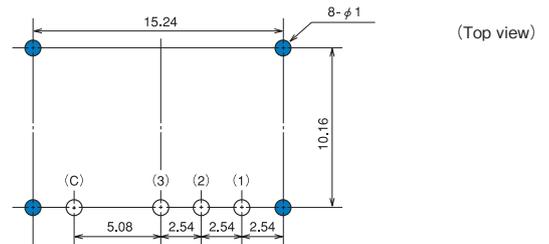
### ■ Specifications

Rating	0.4VA max. (12VDC max.)
Initial contact resistance	200mΩ max. (1.5 mA 200 μVAC)
Dielectric strength	250 VAC 1 minuteΩ
Insulation resistance	100 MΩ min. (100 VDC)
Electrical life	10,000 cycles
Operating force	1.96~5.88 N·cm
Operating temperature range	-20~+70°C
Storage temperature range	-40~+85°C

### ■ Part Numbering

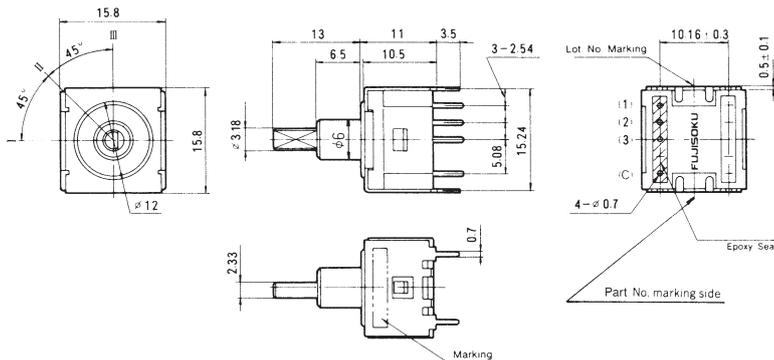


### ■ PC Hole Layouts



### MRB series

#### ★MRB1-3-Z 1-pole 3-positions



Terminal numbers are not shown on the switch.

Switching function			
Circuit arrangement			Circuit diagram
Position I	Position II	Position III	
ON	ON	ON	
C-1	C-2	C-3	

The shaft fully rotates 360 degrees. In the shaft positions other than I, II and III, the contacts is in the OFF state.

**Optional Accessories**

《Sold separately》

Part Name		Knob			
		FB type		FN type	
Dimensions					
Part No.		<b>140000050598</b>	<b>140000051012</b>	<b>140000050956</b>	<b>140000050601</b>
Color	Body	Silver	Black	Silver	Black
	Indicator Line	Black	White	Black	White
Body Material		Aluminium		Aluminium	

●For the hexagon wrench for FB/FN types, choose the M4 wrench (2 mm) available on the market.

**Handling Precautions**

**1. Soldering Specifications**

(1)Manual Soldering

Device : Soldering iron

360°C, Max.; 3 seconds, Max.

(2)Auto Soldering

Device: Jet wave type or dip type

275°C, Max.; 6 seconds, Max.

- Pre-heating should be done at temperatures from 80 to 120°C and within 120 seconds

(3)When soldering two or more terminals to the common land, use the solder resist to solder them independently.

**2. Flux Cleaning**

(1)For the solvent, use the fluorine-based or alcohol-based solvent.

Solvent: Fluorine or Alcohol type

(2)Do not use the ultrasonic cleaning system.

**3. Mounting of Switch**

(1) Use the PC boards of φ1 holes.

(2)Do not bend the terminals before mounting the switch on the PC board.

(3)After mounting the switch, do not place the device in such a way that the device weight will be applied on the knob, etc. of the switch.

(4)Do not apply a load exceeding 29.4 N (3 kgf) to the knob.